

Substances	Limitations
Phosphorothioic acid, O, O, O-triphenyl ester, <i>tert</i> -butyl derivatives (CAS Reg. No. 192268–65–8) .	For use only as an extreme pressure-antiwear adjuvant at a level not to exceed 0.5 percent by weight of the lubricant.
Polyurea, having a nitrogen content of 9–14 percent based on the dry polyurea weight, produced by reacting tolylene diisocyanate with tall oil fatty acid (C <sub>16</sub> and C <sub>18</sub> ) amine and ethylene diamine in a 2:2:1 molar ratio .	For use only as an adjuvant in mineral oil lubricants at a level not to exceed 10 percent by weight of the mineral oil.
Polybutene (minimum average molecular weight 80,000) .....	Addition to food not to exceed 10 parts per million.
Polybutene, hydrogenated; complying with the identity prescribed under § 178.3740.	Do.
Polyethylene .....	Do.
Polyisobutylene (average molecular weight 35,000–140,000 (Flory)) .	For use only as a thickening agent in mineral oil lubricants.
Sodium nitrite .....	For use only as a rust preventive in mineral oil lubricants at a level not to exceed 3 percent by weight of the mineral oil.
Tetrakis[methylene(3,5-di- <i>tert</i> -butyl-4-hydroxyhydrocinnamate)]methane (CAS Reg. No. 6683–19–8) .	For use only as an antioxidant in lubricants at a level not to exceed 0.5 percent by weight of the lubricant.
Thiodiethylenebis (3,5-di- <i>tert</i> -butyl-4-hydroxyhydrocinnamate) (CAS Reg. No. 41484-35-9) .	For use as an antioxidant at levels not to exceed 0.5 percent by weight of the lubricant.
Tri[2(or 4)-C <sub>9-10</sub> -branched alkylphenyl]phosphorothioate (CAS Reg. No. 126019–82–7) .	For use only as an extreme pressure-antiwear adjuvant at levels not to exceed 0.5 percent by weight of the lubricant.
Triphenyl phosphorothionate (CAS Reg. No. 597–82–0) .....	For use as an adjuvant in lubricants herein listed at a level not to exceed 0.5 percent by weight of the lubricant.
Tris(2,4-di- <i>tert</i> -butylphenyl)phosphite (CAS Reg. NO. 31570–04–4) .	For use only as a stabilizer at levels not to exceed 0.5 percent by weight of the lubricant.
Thiodiethylenebis(3,5-di- <i>tert</i> -butyl-4-hydroxyhydrocinnamate) (CAS Reg. No. 41484–35–9) .	For use as an antioxidant at levels not to exceed 0.5 percent by weight of the lubricant.
Zinc sulfide .....	For use at levels not to exceed 10 percent by weight of the lubricant.

(b) The lubricants are used on food-processing equipment as a protective antirust film, as a release agent on gaskets or seals of tank closures, and as a lubricant for machine parts and equipment in locations in which there is exposure of the lubricated part to food. The amount used is the minimum required to accomplish the desired technical effect on the equipment, and the addition to food of any constituent identified in this section does not exceed the limitations prescribed.

(c) Any substance employed in the production of the lubricants described in this section that is the subject of a regulation in parts 174, 175, 176, 177, 178 and §179.45 of this chapter conforms with any specification in such regulation.

[42 FR 14609, Mar. 15, 1977]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §178.3570, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

#### § 178.3600 Methyl glucoside-coconut oil ester.

Methyl glucoside-coconut oil ester identified in §172.816(a) of this chapter may be safely used as a processing aid (filter aid) in the manufacture of

starch, including industrial starch-modified complying with §178.3520, intended for use as a component of articles that contact food.

#### § 178.3610 *a*-Methylstyrene-vinyltoluene resins, hydrogenated.

Hydrogenated *α*-methylstyrene-vinyltoluene copolymer resins having a molar ratio of 1 *α*-methylstyrene to 3 vinyltoluene may be safely used as components of polyolefin film intended for use in contact with food, subject to the following provisions:

(a) Hydrogenated *α*-methylstyrene-vinyltoluene copolymer resins have a drop-softening point of 125° to 165 °C and a maximum absorptivity of 0.17 liter per gram centimeter at 266 nanometers, as determined by methods titled “Determination of Softening Point (Drop Method)” and “Determination of Unsaturation of Resin 1977,” which are incorporated by reference. Copies are available from the Center for Food Safety and Applied Nutrition (HFS–200), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, or available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.

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(b) The polyolefin film is produced from olefin polymers complying with §177.1520 of this chapter, and the average thickness of the film in the form in which it contacts food does not exceed 0.002 inch.

[42 FR 14609, Mar. 15, 1977, as amended at 47 FR 11847, Mar. 19, 1982; 54 FR 24898, June 12, 1989]

**§ 178.3620 Mineral oil.**

Mineral oil may be safely used as a component of nonfood articles intended for use in contact with food, subject to the provisions of this section:

(a) White mineral oil meeting the specifications prescribed in §172.878 of this chapter may be used as a component of nonfood articles provided such use complies with any applicable limitations in parts 170 through 189 of this chapter. The use of white mineral oil in or on food itself, including the use of white mineral oil as a protective coating or release agent for food, is subject to the provisions of §172.878 of this chapter.

(b) Technical white mineral oil identified in paragraph (b)(1) of this section may be used as provided in paragraph (b)(2) of this section.

(1) Technical white mineral oil consists of specially refined distillates of virgin petroleum or of specially refined distillates that are produced synthetically from petroleum gases. Technical white mineral oil meets the following specifications:

(i) Saybolt color 20 minimum as determined by ASTM method D156-82, "Standard Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)," which is incorporated by reference. Copies may be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia, PA 19103, or may be examined at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408.

(ii) Ultraviolet absorbance limits as follows:

Wavelength (mμ)	Maximum absorbance per centimeter optical pathlength
280 to 289 .....	4.0
290 to 299 .....	3.3

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Wavelength (mμ)	Maximum absorbance per centimeter optical pathlength
300 to 329 .....	2.3
330 to 350 .....	0.8

Technical white mineral oil containing antioxidants shall meet the specified ultraviolet absorbance limits after correction for any absorbance due to the antioxidants. The ultraviolet absorbance shall be determined by the procedure described for application to mineral oil under "Specification" on page 66 of the "Journal of the Association of Official Agricultural Chemists," Volume 45 (February 1962) (which is incorporated by reference; copies are available from the Center for Food Safety and Applied Nutrition (HFS-200), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, or available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408), disregarding the last two sentences of that procedure and substituting therefor the following: Determine the absorbance of the mineral oil extract in a 10-millimeter cell in the range from 260-350 mμ, inclusive, compared to the solvent control. If the absorbance so measured exceeds 2.0 at any point in range 280-350 mμ, inclusive, dilute the extract and the solvent control, respectively, to twice their volume with dimethyl sulfoxide and remeasure the absorbance. Multiply the remeasured absorbance values by 2 to determine the absorbance of the mineral oil extract per centimeter optical pathlength.

(2) Technical white mineral oil may be used wherever mineral oil is permitted for use as a component of nonfood articles complying with §§175.105, 176.200, 176.210, 177.2260, 177.2600, and 177.2800 of this chapter and §§178.3570 and 178.3910.

(3) Technical white mineral oil may contain any antioxidant permitted in food by regulations issued in accordance with section 409 of the Act, in an amount not greater than that required to produce its intended effect.

(c) Mineral oil identified in paragraph (c)(1) of this section may be used